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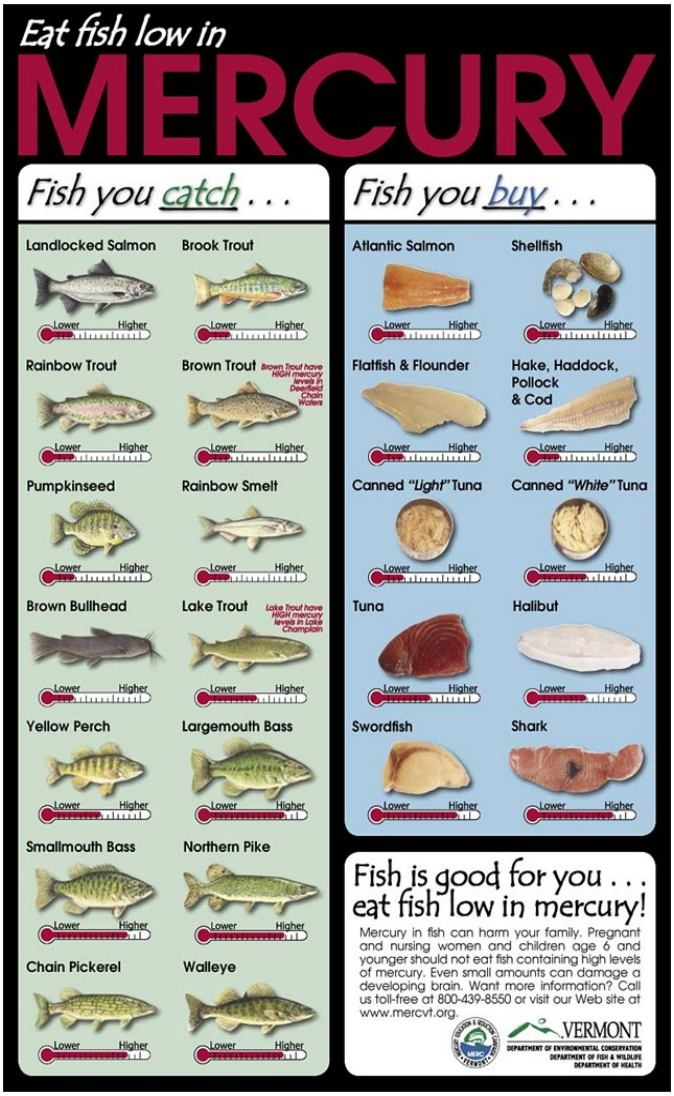
KICKAPOO ENVIRONMENTAL OFFICE

The Green Clan

Mercury in Fish — Article by Tej Attili, Water Quality Coordinator

Mercury is a naturally occurring element in the environment and is also released into the air through industrial pollution. Mercury that falls from the air can accumulate in streams, ponds, and oceans. Once in the water, the mercury settles to the bottom, and can be transformed into methyl mercury by way of chemical changes due to bacteria in water. The methyl mercury can then be absorbed into fish by way of their gills or the organisms that they consume. This means that mercury levels in predator fish will usually be higher. Once in the fish's body, the methyl mercury binds with the tissues of the fish, even the muscle tissue; cooking will not even reduce the amount of methyl mercury in the fish body. Methyl mercury builds up more in some fish than others depending on what they eat how long they live, and how high up the food chain they are. Fish are the main sources of mercury exposure to humans and that mercury is in the form of methyl mercury. Other forms of mercury, such as that in dental amalgams are minor contributors to human mercury exposure.



Fish are an important part of a healthy diet as they contain high-quality protein and other essential nutrients, low in saturated fat, and contain omega-3 fatty acids. A well-balanced diet that includes a variety of fish can contribute to heart health and children's proper growth and development. So, women and young children in particular should include fish in their diets due to the many nutritional benefits. However, nearly all fish contain traces of mercury. For most people, the risk from mercury by eating fish is not a health concern. Yet, some fish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks from mercury in fish depend on the amount of fish eaten and the levels of mercury in the fish and shellfish. Therefore, the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) are advising women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish that are lower in mercury.

As high concentrations of Mercury were found in the Largemouth Bass in the two ponds that were sampled in 2010, it is not safe to regularly eat Largemouth Bass from any ponds on the Kickapoo Nation. Please visit the Kickapoo Environmental Office website for more information or call Tej Attili, Water Quality Coordinator at (785) 486 2601 x-7.

The Green Clan

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Working Together for a Better Community!

Severe Weather Warning Sirens

The Kickapoo Tribe installed six warning sirens throughout the Kickapoo Reservation in the months of September through December 2011.

The sirens will be activated by the Kickapoo Police Department 24 hour Dispatch for the following reasons:

- *Tornado or straight line winds are sighted by a trained weather spotter in the immediate area.*
- *Notification from the National Weather Service of tornado or straight line winds in the immediate area*
- *Monthly testing*

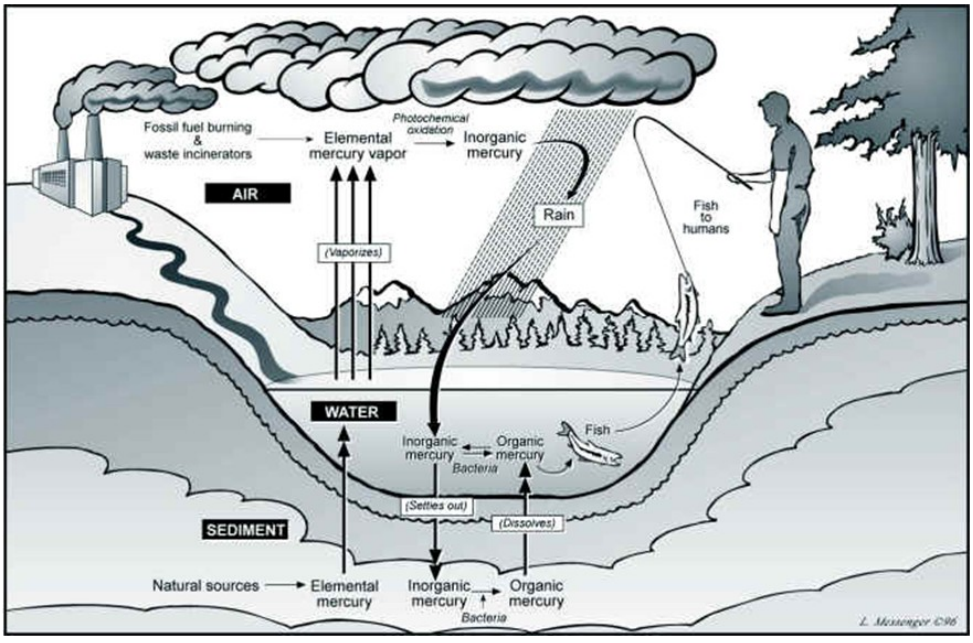
Monthly testing will be conducted on the first Monday of each month at noon from March through October. In the event severe weather is threatening on the planned testing date; the test will be postponed until the following Monday at noon. Expect the test to last 1-2 minutes.

Any questions about the operation and testing procedures can be directed to the Kickapoo Police Department: 785-486-3665.

Airborne Mercury — Article by Mike Kelley, Air Quality Coordinator

Nearly 65% of the mercury that ends up in the atmosphere comes from the burning of coal. As Kansas gets a large majority of its own electricity from coal power, not to mention the fact that the Kickapoo reservation is ringed by nine coal power plants, means that this should be an area of concern for us all.

What are the issues that make mercury such a problem? Mercury is problem due in no small part to its peculiar characteristics. The first of which is its ability to stay in the atmosphere for long periods of time, sometimes more than six months. This means, that mercury that finds its way into our atmosphere will also travel long distances carried by air currents. Mercury that is produced in other states, or in many cases other countries, can find itself being deposited into our soil and streams.



Another issue with mercury is its ability to bioaccumulate. This means that rather becoming more dilute as it makes its way up the food chain, it actually become more concentrated. This is why you see many warnings about eating fish caught from certain ponds and streams. If you eat those fish, you are also putting all the mercury that the fish you caught ate, and the things it ate, etc… all the way down to the very start of the food chain.

Some ways we can reduce mercury in the atmosphere would be to use less electricity and utilizing more renewable energy sources. Through the use of good stewardship practices, maybe someday our children will be able to enjoy the fish in our streams without having to worry about the dangers of toxic substances.